

NATIONAL WEATHER SERVICE INSTRUCTION 10-330

July 8, 2003

Operations and Services

MARINE AND COASTAL WEATHER SERVICE PROGRAM, NWSPD 10-3

OCEAN ICE SERVICES

NOTICE: This publication is available at: <http://www.nws.noaa.gov/directives/>

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This directive updates information in product examples.

Signed

June 20, 2003

Gregory A. Mandt
Director, Office of Climate,
Water, and Weather Services

Date

OCEAN ICE SERVICES

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1. Introduction. This instruction describes the NWS Ocean Ice Services.
2. Alaskan Ice Products. Forecasts, analyses, and advisories will be produced routinely throughout the year by the WFO Anchorage for the sea waters surrounding Alaska. Lake ice and icebergs or glacier ice detached from glaciers and floating in sea water are excluded.
3. Sea Ice Advisory. A 5 day Sea Ice Advisory will be issued three times a week on Mondays, Wednesdays, and Fridays.
 - 3.1 Mission Connection. The Sea Ice Advisory is an alphanumeric product that provides analysis, forecast, and climatological information pertaining to sea ice in the waters surrounding Alaska. The Sea Ice Advisory is critical for vessels in planning a safe route through waters routinely impacted by sea ice movement. This product is intended to provide information to assist in the protection of life and property and enhance the nation's economy.
 - 3.2 The Seasonal Ice Outlook. The Seasonal Ice Outlook should be included in the issuance of the first Sea Ice Advisory of each month and carried for a week.

The objective of the outlook is to identify a representative pattern year from the ice atlas for the outlook period.

4. Graphic Products. Graphic products should be issued 3 times weekly on Mondays, Wednesdays, and Fridays. Graphic products will be consistent with the concurrent text product. Graphic sea surface temperature analyses should be issued 2 times weekly on Tuesdays and Thursdays. In addition, the National Weather Service (NWS) and the National Ice Center (NIC) should confer on difficult sea ice analyses and forecasts.
 - 4.1 Ice Analysis. A graphical analysis of the sea ice conditions over the waters surrounding Alaska, West from the Kenai Peninsula to 171E and North to the Bering Sea and Arctic Ocean.
 - 4.1.1 Mission Connection. The Ice Analysis is a hand-drawn graphic depicting sea ice locations, concentrations, and thickness. The Ice Analysis is issued routinely to aid ships navigating the ice-covered waters surrounding Alaska. The information is critical for vessels in planning a safe route through waters routinely impacted by sea ice movement. This product is intended to provide information to assist in the protection of life and property and enhance the nation's economy.
 - 4.2 Cook Inlet Ice analysis. A detailed graphical analysis of the sea ice conditions over the waters of the Cook Inlet.
 - 4.3 Sea Surface Temperature Analysis. A graphical depiction of sea water temperatures for the areas surrounding Alaska which includes the latest ice edge.

4.3.1 Mission Connection. The Sea Surface Temperature Analysis is a hand-drawn graphic depicting sea surface temperature contours for the waters surrounding Alaska. The product is issued routinely to provide sea surface temperature information to vessels operating in the waters around Alaska. It complements the suite of sea ice graphics issued for this region. The Sea Surface Temperature Analysis product is intended to provide information to assist in the protection of life and property and enhance the nation's economy.

4.4 Five Day Sea Ice Forecast. A graphical 5 day forecast, showing expected ice conditions over the waters surrounding Alaska.

4.4.1 Mission Connection. The Five Day Sea Ice Forecast is a hand-drawn graphic depicting forecast sea ice conditions over the waters surrounding Alaska valid at the day five period. The Five Day Sea Ice Forecast is issued routinely updated when necessary, to aid ships navigating the sea waters surrounding Alaska. The information is critical for vessels in planning a safe route through waters routinely impacted by sea ice movement. This product is intended to provide information to assist in the protection of life and property and enhance the nation's economy.

5. Marine Weather Statement. Ice also forms in various bays and coastal areas of the 48 contiguous states. Marine Weather Statements(MWSs) may be used to alert mariners of such conditions in their marine area if, in the forecaster's judgement, they may be hazardous to shipping.

5.1 Mission Connection. Marine Weather Statements provide the public with detailed marine weather information describing non-severe, but potentially hazardous conditions; and to provide information for a variety of conditions not covered by warnings or routine forecasts. WFOs should issue MWSs if, in the forecaster's judgement, ice conditions are forecast to be hazardous to shipping.

APPENDIX A- EXAMPLES OF OCEAN ICE PRODUCTS

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1. Examples of Alaskan Ice Products.

1.1 Alaskan Sea Ice Advisory.

/C FZAK70 PANC 141510

ICEANC

SEA ICE ADVISORY FOR WESTERN AND ARCTIC ALASKAN COASTAL WATERS

NATIONAL WEATHER SERVICE ANCHORAGE ALASKA

ISSUED 336 PM AST WED 12 MAR 2003

FORECAST VALID MON 17 MAR 2003

PLEASE CALL THE RUSS PAGE AT 907 266 5113 OR FAX TO ICE DESK AT
907 266 5188 OR EMAIL TO RUSSPAGE.ICE@NOAA.GOV IF THE ANALYSIS IN
YOUR AREA IS WRONG. TYPE THE FOLLOWING URL IN LOWER CASE...
PAFC.ARH.NOAA.GOV/ICE.PHP TO OBTAIN A GRAPHIC DEPICTION OF THE ICE
ANALYSIS AND 5 DAY ICE FORECAST ON THE INTERNET. PLEASE NOTE THAT
TIMELY DELIVERY OF DATA AND PRODUCTS THROUGH THE INTERNET IS NOT
GUARANTEED.

CONFIDENCE...MODERATE TO HIGH FOR THE BERING SEA AND MODERATE FOR
COOK INLET.

ARCTIC OCEAN.

SEA ICE COVERED.

BERING SEA.

AREA 9A. NORTON SOUND...SLEDGE ISLAND TO NUNAKTUK ISLAND.

AREA 9B. ST. LAWRENCE WATERS...DALL POINT TO WALES.

SEA ICE COVERED.

AREA 14 ST. MATTHEW ISLAND WATERS.

AREA 8. CAPE NEWENHAM TO DALL POINT.

AREA 6A. BRISTOL BAY NORTH PORTION FROM CAPE NEWENHAM TO PORT HEIDEN.

4 TO 8 TENTHS NEW ICE LIES IN KVICHAK AND NUSHAGAK BAYS NORTH OF A CURVE FROM 58.6N 157.5W TO 58.5N 158.3W TO CAPE CONSTANTINE.

THE MAIN ICE EDGE LIES NORTH OF A CURVE FROM 59.1N 161.8W TO 59.1N 162.2W TO 59.5N 162.3W TO 59.2N 163W TO 59N 163.8W TO 59.4N 168W TO 59.6N 167.7W TO 59.8N 174W TO 59.5N 174.3W TO 59.4N 175.3W TO 59.7N 176.8W TO 60.1N 177.2W TO 60.2N 176.7W TO 60.9N 180 TO 60.8N 179E TO 61.5N 176.5E TO 61.3N 175.3E TO 61.5N 174.2E TO 61.2N 173.5E TO 61.4N 173.4E TO 60N 170E AND SOUTHWEST.

EAST OF 164W...THE ICE EDGE IS 4 TO 6 TENTHS NEW ICE. WEST OF 164W...THE ICE EDGE IS 1-10 TENTHS FIRST YEAR THIN...YOUNG AND NEW ICE OFTEN LYING IN STRIPS. THE MAIN PACK ICE LIES WITHIN 25 NM OF THE ICE EDGE.

THE ICE EDGE IS 155 NM NORTH OF ST. PAUL ISLAND AND 90 NM SOUTHWEST OF ST. MATTHEW ISLAND.

FORECAST THROUGH MONDAY.

HIGH PRESSURE WILL PERSIST OVER NORTHERN ALASKA THROUGH THURSDAY.

A LARGE LOW COMPLEX 450 NM SOUTHWEST OF KETCHIKAN WILL MOVE TO THE NORTHERN GULF OF ALASKA MONDAY.

EAST OF 170W...THE ICE EDGE WILL MOVE 28 NM TO THE SOUTHWEST BY MONDAY AFTERNOON.

WEST OF 170W...THE ICE EDGE WILL MOVE 12 NM TO THE WEST WITH MOST OF THE MOVEMENT OCCURRING BY FRIDAY MORNING.

COOK INLET.

THE MAIN ICE EDGE LIES NORTH OF A CURVE EXTENDING FROM 20 NM SOUTHWEST OF POINT POSSESSION TO 17 NM WEST SOUTHWEST OF POINT POSSESSION TO 5 NM WEST SOUTHWEST OF POINT POSSESSION TO THE NORTH FORELAND. THE ICE EDGE IS 4 TO 10 TENTHS NEW ICE. OPEN WATER LIES NEXT TO THE SUSITNA RIVER MUD FLATS.

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SHOREFAST ICE LIES ON THE SUSITNA RIVER...TRADING BAY AND
FIRE ISLAND MUD FLATS.

7 TO 8 TENTHS NEW ICE LIES IN TUXEDNI BAY.

4 TO 6 TENTHS NEW ICE LIES IN CHINITNA BAY.

THE REST OF COOK INLET IS SEA ICE FREE.

FORECAST THROUGH MONDAY.
HIGH PRESSURE WILL PERSIST OVER NORTHERN ALASKA THROUGH THURSDAY.

A LARGE LOW COMPLEX 450 NM SOUTHWEST OF KETCHIKAN WILL MOVE TO
THE NORTHERN GULF OF ALASKA MONDAY.

WELL BELOW NORMAL TEMPERATURES WILL WARM TO BELOW NORMAL BY
SUNDAY. NORTHERLY WINDS WILL PERSIST THROUGH MONDAY.

NEW ICE WILL CONTINUE TO FORM NORTH OF THE EAST AND WEST
FORELANDS THROUGH MONDAY.

NEW ICE WILL CONTINUE TO FORM IN TUXEDNI AND CHINITNA BAYS
THROUGH MONDAY.

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1.1.1 Examples of Alaskan Sea Ice Advisories With a Seasonal Ice Outlook.

FZAK70 PANC 040046
ICEANC

SEA ICE ADVISORY FOR THE WESTERN AND ARCTIC ALASKAN COASTAL
WATERS
NATIONAL WEATHER SERVICE ANCHORAGE ALASKA
3:45 PM AST WED 3 JAN 2001

(...Sea ice advisory information...)

OUTLOOK FOR THE WINTER...

THE SEA ICE ON MONDAY 1 JANUARY 2001 LOOKS MOST LIKE 1985.

1999 IS A VERY DISTANT SECOND PLACE YEAR. ONE HAS TO SUBTRACT 3 WEEKS TO HAVE A SIMILAR ICE EDGE SHAPE...JANUARY 1 2001 ICE EDGE LOOKS MOST LIKE 7 DECEMBER 1998

NO OTHER YEARS ARE CLOSE.

BASED ON 1985...THE ICE EDGE WILL BE WELL NORTHEAST OF ST PAUL AND ST MATHEWS ISLANDS FOR THE OPILIO CRAB SEASON. THE ICE EDGE WILL MOVE TOWARD THE WEST SOUTHWEST IN THE BERING SEA AS THE ALASKA MAINLAND BECOMES COLDER THIS MONTH. COOK INLET ICE EDGE WILL APPROACH NORMAL BY THE END OF THE MONTH BUT THE SEA ICE WILL BE MUCH THINNER THAN NORMAL

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1.1.1.a Outlook for the Late Winter and Early Spring

FZAK70 PANC 040046
ICEANC

SEA ICE ADVISORY FOR THE WESTERN AND ARCTIC ALASKAN COASTAL
WATERS
NATIONAL WEATHER SERVICE ANCHORAGE ALASKA
4 PM AST MON 5 FEB 2001

(...Sea ice advisory information...)

OUTLOOK FOR LATE WINTER AND EARLY SPRING...

THE ICE EDGE IN THE BERING SEA AS OF WEDNESDAY 31 JANUARY 2001
CONTINUES TO LOOK MOST LIKE 1985. NO OTHER YEAR IS CLOSE IN SHAPE.

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1.1.1.b Outlook for the Spring and Early Summer

FZAK70 PANC 040046
ICEANC

SEA ICE ADVISORY FOR THE WESTERN AND ARCTIC ALASKAN COASTAL
WATERS
NATIONAL WEATHER SERVICE ANCHORAGE ALASKA

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3 PM AST MON 1 MAY 2001

(...Sea ice advisory information...)

OUTLOOK FOR THE SPRING AND EARLY SUMMER...

THE ICE EDGE AS OF MAY 01 LOOKS MOST LIKE 1996. 1988 AND 1993 ARE IN
SECOND AND THIRD PLACE.

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2. Marine Weather Statement Example.

FZUS73 KDTX 072113
MWSDTX
LHZ421-070300-

MARINE WEATHER STATEMENT
NATIONAL WEATHER SERVICE DETROIT/PONTIAC MI
413 PM EST SUN 7 JAN 2001

..SEA ICE RAPIDLY DEVELOPING IN SAGINAW BAY...

A FRIGID ARCTIC HIGH ARRIVED A DAY EARLIER THAN EXPECTED ACROSS LAKE HURON. TEMPERATURES BELOW ZERO HAVE CAUSED EXTENSIVE ICE GROWTH AROUND BAY CITY ACCORDING TO THE UNITED STATES COAST GUARD HINDERING SHIPPING INTO THAT PORT.

SHIPPERS IN THE BAY CITY AREA SHOULD BE ALERT AND CONTACT THE COAST GUARD FOR ASSISTANCE AND INSTRUCTIONS.

THIS STATEMENT WILL BE UPDATED AT 10 PM EST TONIGHT.

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